

**REMARKS**

Claim 5 is pending and is amended to require CatSper3 activity in part (a), and to include part (e) which requires least 4 consecutive amino acids (*i.e.*, 12 consecutive nucleotides) of a CatSper3 protein. This amendment is supported by the specification and thus does not add new matter (*see, e.g.*, ¶¶ 8, 61, 63). Claim 5 will be pending in the instant application upon entry of this amendment.

The rejection is addressed below. All citations to paragraph numbers throughout this paper correspond to the application as published (US 2006/0257868).

**Rejection Under 35 U.S.C. § 102(e)**

Claim 5 was rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. 6,183,751 (“Chang”). Specifically, the Office Action asserts that bases 19901-19908 of Chang correspond to bases 617-625 of SEQ ID NO: 1 (Office Action at page 3; *see also* Office Action of January 29, 2009 at page 3). Applicants respectfully traverse this rejection with respect to amended claim 5.

Under 35 U.S.C. § 102, “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Amended claim 5 is listed above. Applicants submit that Chang does not contain each and every element of amended claim 5, and thus does not anticipate claim 5.

Bases 19901-19908 of Chang are an eight nucleotide sequence. The Office Action has not established that this eight nucleotide sequence encodes a protein having CatSper3 activity in a cell capable of expressing CatSper3 activity as recited in claim 5. Furthermore, these eight nucleotides disclosed by Chang cannot anticipate at least 4 consecutive amino acids of a CatSper 3 protein as recited in claim 5. Therefore, Chang does not include every element of parts (a) or (e) of claim 5.

Bases 617-625 of SEQ ID NO: 1 correspond to a portion of the codon for amino acid 206, the codon for amino acids 207-208, and a portion of the codon for amino acid 209 of SEQ ID NO: 2. Amino acids 206-209 do not fall within the defined amino acid sequences for the pore region or transmembrane domains of CatSper3 as defined in the specification (*see ¶ 62*). Therefore, Chang does not include every element of parts (b) or (d) of claim 5.

Claim 5 part (c) recites “*at least* an extracellular loop of a CatSper3 protein” (emphasis added). Thus part (c) requires, *at a minimum*, that the claimed isolated nucleic acid encode an extracellular loop of a CatSper3 protein, which is defined as “approximately residues 118-127, 181-216 and 269-281 of SEQ ID NO: 2” (¶ 62). Although amino acids 206-209 (*i.e.*, bases 19901-19908 of Chang) fall *within* residues 181-216, they do not comprise *at least* residues 181-216. Therefore, Chang does not include every element of part (c) of claim 5.

Chang does not disclose every element of amended claim 5, and thus cannot anticipate amended claim 5. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection of claim 5 under 35 U.S.C. § 102.

**CONCLUSION**

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-0219, under Order No. 0110313.00138US2 from which the undersigned is authorized to draw.

Respectfully submitted,

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